THE DENTAL PRACTITIONER

A monthly journal for the Practitioner and his Staff

VOL. II, NO. 8 APRIL, 1952

Incorporating the Official Supplement of
The Dental Laboratories Section of the Surgical Instrument Manufacturers' Association

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A Monthly Journal for the Practitioner and his Staff

(Incorporating the Proceedings of the British Society of Periodontology and the Official Supplement of the S.I.M.A.—Dental Laboratories Section)

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Manuscript should preferably be typewritten with double spacing and wide margins, and the author should keep a copy. Articles and their illustrations become the property of *The Dental Practitioner*, unless authors reserve the right before publication.

Illustrations should be clearly numbered and legends should be written on a separate sheet of paper and not put on the backs of the originals. Each figure should be referred to in the text. Prints are preferred to X-ray negatives and should be on glossy paper. Lettering which is to appear on illustrations is best shown on an overlay or rough sketch. It should not be put on the original.

Tables should be typed on separate pages and each should have a caption which will explain the data without reference to the text.

References to dental literature should be recorded in the text, with the name of the author and the year of publication in parentheses. In the bibliography they should be arranged in alphabetical order in the following form, the abbreviations of periodicals being those adopted in the *World List of Scientific Periodicals*, e.g. :—

SMITH, J. A. K. (1949), *Brit. dent. J.*, **86**, 271.

LEWIS, R. W. B. (1947), *The Jaws and Teeth*, 2nd ed., 471. London: Science Publishing Co.

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THE
DENTAL PRACTITIONER
A Monthly Journal for the Practitioner and his Staff

Vol. II, No. 8 April, 1952

EDITORIAL

THANK YOU!

It would appear that our February editorial, "Requests", was not only read by our readers but that it stimulated some to action. To those who responded so promptly with illustrated hints and case histories we are very grateful; to others we would remind them that we look forward to hearing from them in the near future.

The Dental Practitioner is essentially a journal for the practising dentist and his staff. The bulk of our articles, etc., are confined to this heading, whilst at the same time we do publish other more theoretical and scientific matter which we feel is of interest and has a definite practical application to our chosen careers. However, it is only by each one of us, interested in our work, submitting subject-matter, that such a journal can continue to hold its now well-recognized position amongst the dental literature of the century.

OUR FUTURE CHARTS

Your help required!

As we informed you in February, we are now working on a new series of monthly charts "For Your Patient's Instruction". To help us to make this a really useful and highly successful series we appeal to any of you who have now, or may at a future date happen to come across, a particularly good X-ray showing clearly a typical pathological condition, to send us the film so that, if suitable, we can use it in our charts. Incidentally, an added help would be a film of a corresponding area, showing the same teeth, etc., but without the pathological condition, so that the two films could be printed on the one chart, thus enabling a comparison to be made. Do please remember this our latest appeal! Look at all those X-rays you take from now on and say "Is this a good one to show this condition clearly?" If your own answer is "Yes", then send it to us and let your colleagues have the use of it in their explanations to their patients. We are a comparatively small fraternity in the dental profession and our aim should always be "To Help One Another".

THE PRESENT NUMBER

In this number we publish some very interesting articles from three different countries—the Thesis, by P. M. C. James, which won the Gibbs Travelling Scholarship; a very cleverly illustrated report by Dr. E. A. Scher and W. F. M. Fitzgerald, of Cork, Eire; and an article by Th. Brandrup-Wognsen, of Sweden, dealing with anatomical articulators, which will undoubtedly be read and enjoyed by all those of us who at various times have frequently discussed the pros and cons of this type of articulator and, let us admit it, without really understanding *exactly* the true position.

DENTAL HEALTH EDUCATION FOR THE PUBLIC AS A FACTOR IN PREVENTIVE DENTISTRY*

By **P. M. C. JAMES**, L.D.S. R.C.S. Eng., D.P.D. (St. A.)

THE primary task of the dental profession in this country is to raise the standard of dental fitness in the community; and to make, and keep, as high a proportion of the population as possible dentally fit. In this task the profession is faced with two main problems, intimately related to one another. The first is the acute shortage of dentists, quite insufficient to give an adequate service to the whole country. The second is the lack of dental consciousness which prevails: an almost universal absence of appreciation regarding the importance of positive dental health.

It would appear then that an impasse has been reached. It may fairly be argued that to embark on a universal scheme for dental health education would at the moment lead only to annoyance and frustration, as the number of dentists is not large enough to meet current requirements, let alone an increased demand.

If the problem is examined in its widest perspective, it is obvious that the only constructive solution is to be found in the initial prevention of dental disease, rather than its attempted cure. If a substantial proportion of the profession can be diverted to the care of the future generations, and if these future generations can have instilled into them from the earliest age the significance of dental health, the dental fitness of the country must, in two decades, show a decided turn for the better. This awareness of the importance of the teeth and oral tissues should, in turn, increase the prestige of the dentist, and consequently a larger number of dental students will be recruited, thus further contributing to a simplification of the problem.

It is the purpose of this paper briefly to consider the relationship between preventive dentistry and dental health education. Preventive measures may roughly be divided into two sections: those that are carried out *on* the individual, and those that are carried out *by* the individual. Of the two, it is likely that at present the second is the more significant. For that reason dental health education is of supreme importance, as a good deal of the onus in seeking and maintaining treatment is thrown on to the patient. If the scheme is to be a success they must carry out, in the privacy of their own homes, the instructions of their dental advisors; and they must return to them at regular intervals for routine examinations. G. J. Parfitt (1952) states: "The measures that require co-operation of the patient are generally unsuccessful as interest cannot be maintained, the benefit derived from their use not being readily appreciated."

It is therefore necessary, in order to foster this spirit of interest, to embark on a scheme of dental health education directed at the moment primarily to the priority classes. To perform this task successfully, the co-operation of others is essential, as the dentist who is to carry out the treatment will hardly have the time to embark on health education as well. The assistance of the medical and nursing professions may be sought, and the experimental training of dental hygienists may fill a number of gaps. There are, however, two classes of individuals that merit special attention because of the influence they have among the priority classes: namely, the health visitors and the schoolteachers. For a successful scheme of education the assistance and co-operation of these is essential.

The health visitors are trained nurses attached to local authorities, and it is their job to perform domiciliary duties among the people of their area, usually in connexion with antenatal and maternity and child welfare

* Being the thesis presented by the winner of the Gibbs Travelling Scholarship.

services. They rank highly in the estimation of their patients, and many of these will value an opinion passed during informal conversation in their own homes more than the most elaborate of campaigns organized by the local health authority. Campaigns of any sort are often dismissed from the mind as "just more propaganda"—a word that has acquired a new meaning in the last few years, and which now implies suspicion of the accuracy or motives of the subject matter.

The schoolteacher is another powerful figure in our social system. Much of the success or otherwise of a scheme for dental health education will depend on his co-operation. When a child goes to school the authority of the parents, which has up to this time been absolute, is henceforward shared with the teacher. He is accustomed to imparting knowledge, and what is even more important, his charges are accustomed to absorbing it unquestioningly. The introduction of any form of health education into the routine of lessons brings it into the sphere of something that is taken for granted, rather than an event that comes as a welcome relaxation from the round of schoolwork; as happens so often when the school dental surgeon speaks to them once a year. The schoolteacher is also a link with the parents, via the Parent-Teacher association; and his backing on the importance of dental health may be a powerful influence on the parents. It also rests with him to see that the children keep their appointments.

Dental health education may be defined as follows. It is the convincing of the public as to the importance of dental health, and the designation of a simple system of dental health applicable to all ages, classes, and intellects.

The fundamental message that must be conveyed to the public is that the teeth are an integral part of the body, and not, as is popularly believed, useful but expendible accessories. The relationship of healthy teeth and associated structures with the general health of the individual cannot be overstressed; and in order to maintain a healthy mouth periodic and regular inspections by the dentist must be encouraged. But it should be made clear that the dentist can only assist the patient's own efforts, and that the main responsibility for oral health rests on the shoulders of the individual concerned. Incidentally, an effort should be made to enlighten the public with regard to the nature of the dentists' training and the time taken to qualify. Many people are absolutely ignorant in this matter, and their attitude is often expressed in the words "surely it doesn't take five years to learn how to pull out a tooth"!

What measures may the patient be expected to take to minimize the incidence of dental disease?

The first requirement of the battle against dental disease is sound, well-formed teeth; many workers have demonstrated the relationship between caries incidence and the tooth structure. Toverud (1949), in Norway, has carried out a series of experiments in an Oslo Health Clinic in which a controlled group of children were given a regulated diet, supplemented by calcium and Vitamin D. This supplement was commenced in the mother in the early weeks of pregnancy, and continued throughout the pre-school life of the child. The caries incidence in the treated group was lower at each inspection than in the control group. Similar experiments conducted by Bibby (1943) and Mellanby (1934) suggest similar conclusions, as do those of Schour (Kronfeld and Schour, 1939), although the latter believes that the post-natal feeding is of much greater significance than the nutrition of the mother.

There is general unanimity about the value of dietetic supplements before and after birth, and it should be the task of the medical and dental professions to educate their patients to appreciate this fact. It is one thing to supply expectant mothers and children with vitamin tablets and cod-liver oil; quite another to ensure that they take them. Very few mothers take advantage of the free cod-liver oil available, and thousands of unwanted bottles can be seen at any food office. Milk is a very important food; children should have at least a pint a day, and more if possible.

Instruction on antenatal and post-natal nutrition should be carried out as routine in

the appropriate clinics. Expectant and nursing mothers are usually very receptive to advice which is for the future benefit of their child.

When the teeth start to erupt, new problems at once arise, as they are then exposed to environmental factors. There is considerable controversy in the profession about the exciting factor of dental caries, but that is outside the scope of this paper. Until it is conclusively proved one way or another it is safer to assume that food stagnation, especially carbohydrate stagnation, is a significant factor (Tenscher et al., 1948; Shaw, 1950). The mother should be taught to avoid giving a diet consisting mainly of starches and sugars, and to ensure that the child has a share of detergent foods (Turesky and Bibby, 1944; Knighton, 1942), preferably at the end of meals, and last thing at night. Raw apples are a useful adjunct to the diet, and as a rule children enjoy eating them.

The limitation of carbohydrates presents economic problems at the present time, as proteins are expensive, and many of them scarce. Therefore quantities of carbohydrates are given to satisfy growing appetites. Mack and Urbach (1948) have shown that with an improvement in oral hygiene, and certain dietary supplements, the carbohydrate intake can be increased with a diminished risk of damage.

The value of mechanical tooth-cleaning is recognized by the profession, and the mother should be taught to clean the child's teeth until he is able to do so efficiently himself. The correct method of brushing must be demonstrated, as the majority of the population do so incorrectly, thereby almost completely wasting their time and energy. Fosdick (1950) took a controlled group of students and demonstrated a 30 per cent decrease in caries incidence following a period of careful toothbrushing after food. It must be emphasized that teeth should always be cleaned after all meals and last thing at night.

One of the commonest questions asked by patients is: "What is the best toothpaste to use?" They should be told that the toothpaste is not a panacea to end all decay, but a pleasant and useful adjunct to correct brushing. It should be detergent without being too abrasive, and have an attractive flavour; it may contain substances to reduce surface tension and facilitate removal of debris and plaques; and there may be important possibilities in the addition of urea and dibasic ammonium phosphate as a more active ingredient for caries prophylaxis. Other substances have recently been tried, notably fluorides and penicillin, but the latter is contra-indicated owing to the danger of rendering potentially pathogenic oral bacteria resistant to penicillin.

The mother should be constantly reminded that the deciduous teeth *do* matter. Only too often is heard the cry: "It's only a baby tooth; I'll wait until it hurts him and then have it out". The carious process should be described, with its untreated sequelæ of pain, sepsis, and early loss, and it must be pointed out how insidiously *dental sepsis can undermine positive health*; and how early loss of the deciduous teeth can create orthodontic problems, or aggravate existing ones. This orthodontic consideration is one that makes an immediate appeal to parents, and it may easily be demonstrated with a pair of models.

If all the above advice was faithfully carried out by the patient, or his parents, the acute dental health problems which afflict public and profession alike at present would be considerably alleviated in a generation.

In addition to the individual and priority group education exampled above, there may be a need in the future to condition the whole population towards certain national efforts against caries. In America many areas are adding fluorides to their drinking water, and this scheme is expanding rapidly. American reports demonstrate a considerable reduction in caries incidence among children and adults born and living in high fluorine areas, and although some years must pass before the value of this treatment can be assessed, it obviously has great possibilities (Dean et al., 1947).

Before a scheme of this nature could be started in this country public opinion must be favourably inclined, as there is likely to be a

section of the community opposed to any such "interference", and the cries of "adulteration" can be imagined. The same phenomenon has been observed in several other public health projects, notably immunization against small-pox and diphtheria, or the compulsory pasteurization of milk.

Another important aspect of preventive dentistry, and one not often considered under that heading, is periodontal disease. This may not directly concern the priority classes but is so important that it must be mentioned in a paper of this nature. More teeth are lost in this country due to this factor than through caries. Preventive education would include regular examination, regular scaling and attention, correct and adequate cleaning, correction of orthodontic abnormalities, successful restorative treatment of caries, and a suitable diet containing adequate vitamins, particularly vitamin C.

SUMMARY

It is argued that owing to the shortage of dentists the future accent on dental care must be on preventive dentistry, and as much of the success of preventive measures depends upon the co-operation of the patients in their daily lives, a system of dental health education must be initiated.

As it is not possible for the dental profession to give adequate treatment to the whole population, dental treatment and dental propaganda should be directed towards the rising generation to give a firmer foundation for dental health in the future adult population.

Practical measures to reduce the incidence of dental disease capable of being put into force by the public themselves are considered, and the lines of education discussed. The need for independent assistance from other spheres is emphasized, in particular by health visitors and schoolteachers.

APPENDIX

Dental Health Education

Routine

Routine work in the fields of general practice; in antenatal, maternity, and child welfare clinics; in hospitals; school dental clinics; nursery schools, schools; carried out by dentists, doctors, nurses, hygienists, health visitors, social workers, schoolteachers, etc.

Campaign

Occasional intensification of the education to catch public interest, or the interest of a specific group often in connexion with exhibitions, youth club functions, or general fitness campaigns organized by local health authorities.

METHODS

Seen
Press
Films
Demonstrations
Exhibitions*
Posters
Leaflets
Brochures
Television

Individual example and instruction

Heard
Lectures
Broadcasts
Brains Trusts*
Quizzes, etc.*

* Mainly for campaigns.

An appendix of practical media for dental health education is given.

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CRITICS' CORNER

(Under this heading we print letters which discuss points arising from articles which have appeared in the DENTAL PRACTITIONER, *together with the comments of the authors when necessary. We trust that this section will prove of interest to all our readers and stimulate further discussion.)*

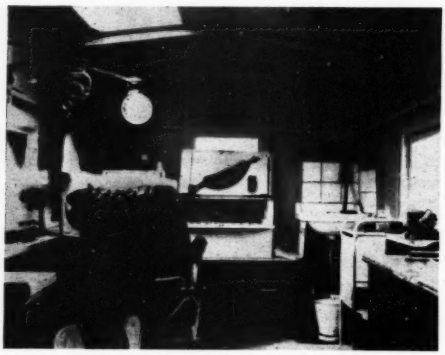
Mobile Dental Services

February 21, 1952.

To the Editor.

Dear Sir,

May I congratulate you on your high standard of material and production. It is a joy to be able to take up a professional magazine and not be quite swamped



by pedantry. I was particularly interested in your Royal Air Force number of January, 1952. Having served with the R.A.F. Dental Branch during the last War for 5¼ years, I read the article by Air Commodore G. A. Ballantyne, C.B.E., D.F.C., with great interest. My interest was the more so, as I had the privilege of operating one of the Mobile Surgeries specifically mentioned by the author. I enclose a photograph showing the " Wimpey " pilot seat, the " Bomb Tail " operating stool and the " Oil Pump " dental engine mentioned in the article. Although I only took over from the inventor of all these amenities, I used the surgery in Southern Italy for a year, and later took it through that country and into Austria. Apart from the ingenious contrivances described in the article, our Surgery was equipped with the following mod. con.:—

a. X-ray viewer and illuminated mouth mirror.

b. Saliva ejector constructed from an electric windscreen wiper which, in turn, operated a suction-type wiper in reverse, the vacuum being created in a tin container which creaked rhythmically as the machine whirred noisily away.

c. An auxiliary 30-gallon water tank made from the wing fuel tank of a Liberator and equipped with a fuel pump which delivered water to the Benghazi hand basin described in the article. By a simple adjustment this water could be led to an outside rose and formed an indispensable shower bath for Italian summer days.

The electrical equipment was driven by aircraft batteries charged from a petrol-electric generating set and the whole formed a convenient and comfortable self-contained unit of which I became very proud and to which I was very attached, as also were the Wing and Group to which we belonged.

Yours sincerely,

PETER A. EDGE.
(Ex F/Lt., Dental Branch, R.A.F.)

Noradrenaline (Arterenol) as a Vasoconstrictor in Dental Local Anæsthesia

An experimental and clinical investigation of 877 cases shows that noradrenaline is well suited as a substitute for adrenaline. Xylocaine solutions with noradrenaline gave all the advantages of the ordinary solution of xylocaine with adrenaline, with no disadvantages or contra-indications. The advantage of using noradrenaline is that it is much more stable than adrenaline, and the solution may be much less acid than the now available local anæsthetics. This means an important improvement because of diminished irritant effect upon the tissues, with consequently less risk of œdema. —BERLING, C., and BJORN, H. (1951), *Odontologisk Revy*, **2**, 153.

PRESENT CONCEPTIONS OF THE MOVEMENTS AND FUNCTIONAL POSITIONS OF THE HUMAN LOWER JAW

AN ARTICULATOR CONSTRUCTION BASED ON THESE PRINCIPLES

By THURE BRANDRUP-WOGNSEN, L.D.S. (Sweden)

In view of the fact that my readers are, of course, familiar with the anatomy of the temporo-mandibular joint, I do not propose to waste time on that subject. I shall deal straight away with current opinions concerning the movements in the two joints and the correlated motions of the lower jaw.

BASIC MOVEMENTS

There are two different kinds of articular movement owing to the division of the joint into upper and lower articular chambers. In the upper half of the joint movements occur in the form of gliding in various directions, whereby the condyle with the meniscus shifts on the eminentia articularis. The term acceleration has been used to define this gliding movement. In the lower half of the same joint, a rotation takes place involving the condylar head. Nor does this rotation as a rule work around a fixed mathematical axis, through the centres of the two condylar heads, on account of the fact that the condylar head transversely does not have a circular shape, being slightly irregular, and that the longitudinal axes of the two condylar heads do not run along the same straight line (*Fig.* 1). However, the deviations as regards the movements concerned in this connexion are so slight as to be negligible in practice. Generally a rotation is taken into account which is assumed to occur around an axis through the centres of the two condyles, being termed the condyle axis.

These gliding and rotating movements in the mandibular joints in their turn give rise to *the various movements of the lower jaw.*

Certain types which may be called *basic movements* are distinguished. They include the opening and closing movements, the forward gliding movements, and the extreme lateral movements. In addition, certain scientists lay stress on the occurrence of a retropulsive motion which, nevertheless, cannot be regarded as being of the same significance. All the other movements performed by the lower jaw are combinations of these basic ones. They have been termed *intermediary movements.*

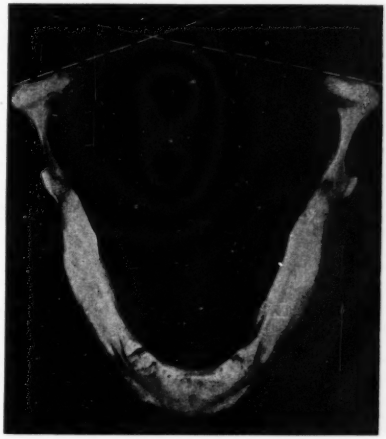


Fig. 1.—Mandible with the condyles seen from above. Note the dotted lines showing the direction of the longitudinal axes of the condyles (Swenson).

As regards the *opening movement* of the lower jaw, I shall not here give a report of the numerous investigations and subsequent conceptions concerning that subject which have appeared in the course of the years and which do not seem necessary in this connexion. Nor shall I, for the same reasons, enter upon the matter of the closing movement. In the present case, the manner in which these movements of the lower jaw affect the construction of an articulator will in the first place be discussed.

THE FIRST MOVEMENT AND OPENING AXIS

About fifteen years ago in Europe, a Swiss scientist, R. Fischer, devoted particular attention to the question of where the opening axis of an articulator is situated. He found that the lower jaw can perform two different opening movements. During *the physiological opening movement*, which represents the movement

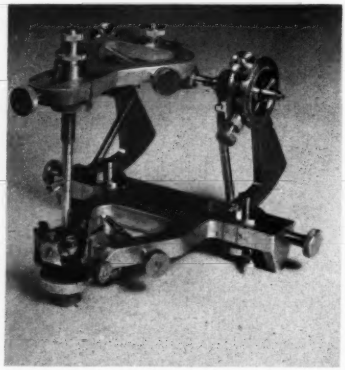


Fig. 2.—The author's instrument.

considered earlier in Europe as the only one, a gliding takes place in the upper part of the joint simultaneously with a rotation in the lower part. The lower jaw turns round an axis which is variable during different phases of the movement. Presupposing an average inclination of the condyle path, Gysi observed that this axis, during the first few centimetres of the opening movement, is situated approximately 1·5 cm. downwards/backwards in relation to the condyle axis. However, Fischer carried out certain experiments in order to discover whether the lower jaw always followed this path in its opening movement, i.e., whether that path is identical with the one traced by the lower jaw during its passage through centric occlusion positions at different heights of the bite. He began by registering the centric occlusion in an edentulous case, using bite rims adapted to the lowest possible height of the bite. By means of a face-bow registration, he mounted the upper model in an articulator where the opening axis coincided with the condylar shaft. Then the lower model was mounted in the occlusion obtained. The bite was raised in the articulator and the new centric occlusion obtained was tested in the mouth of the patient. He observed that he was able to raise the bite up to about 3 cm., the centric occlusion in the articulator and in the mouth still coinciding. When he tried the same experiment in a case with natural teeth, the centric occlusion coincided until the bite was raised by about 2 cm. This, according to Fischer, proves that the opening movement of the lower jaw, when the height of the bite is changed in the way described here, takes place merely by rotation around the condyle axis, thus following another path than that of the physiological opening movement. He called the newly discovered movement the *central opening movement*, as distinguished from the physiological one. Fischer's conclusions derive support from the Swedish dentist Beyron's combined graphic and roentgentomographic examinations in Stockholm, which were published in *Svensk Tandläkare-Tidskrift* (the Swedish Dental Journal) in the first issue of 1942.

On the basis of Fischer's experiments, the conclusion may be drawn that when the opening axis of an articulator coincides with the condylar shaft and, further, when a face-bow is used by mounting the upper cast, the centric relation will not be lost by manipulations with the usual checkbites. When, for instance, the centric relation is registered with a wax checkbite in a case with natural teeth, it is always obtained at a slightly raised height.

Beyron's examinations, however, showed that the rotation axis does not invariably coincide with the assumed condyle axis. In order to ensure accuracy, the true position of the axis will have to be registered.

For this purpose, Hanau (U.S.A.) earlier constructed a kinematic face-bow. McCollum (U.S.A.) appreciated these difficulties and built another instrument for determining the real rotation axis.

In short, the predominant conception is that a rotation axis exists, and the opening axis of modern articulators coincides always with the condylar shaft. This also applies to my own apparatus (*Fig.* 2). In some of the

earlier European articulators, particularly those constructed by Gysi, the opening axis does not coincide with the condylar shaft but corresponds to the axis of the above-mentioned physiological opening movement

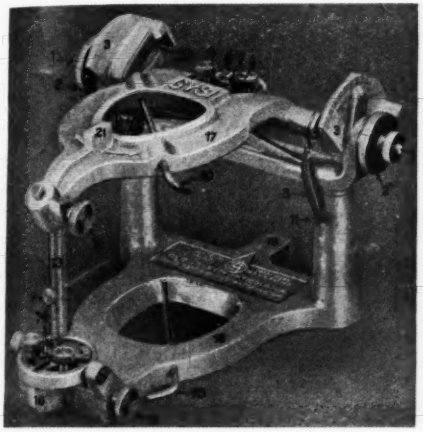


Fig. 3.—The Trubyte articulator.

in cases with average inclination of the condyle path.

In a later instrument constructed by Gysi—the Trubyte articulator—on the other hand, the opening axis has been made to coincide with the condylar shaft (*Fig.* 3). However, he emphatically maintains that manipulations with checkbites in the way mentioned here cannot be performed in the articulator.

When discussing to-day the mechanical details of my own articulator, I shall be comparing mainly the Hanau articulator, Model H (*Fig.* 4), and the Gysi Trubyte instrument.

THE SECOND MOVEMENT

I will now describe the second basic movement, i.e., the forward gliding movement. As will of course be easily conceived, an acceleration will invariably occur during this movement, as well as in certain instances a minor rotation.

Four examples may be given as follow:—

1. When the cusps in a well-balanced case have but slight inclines and when no overbite is manifest, only an acceleration can be referred to during the forward glide. The teeth are then arranged so as to make the occlusal curve follow a circular arch. Further, this circular arch also has to coincide with the condyle path, or a circular arch, concentric to the former arch, has to coincide with the aforementioned path. The lower jaw will then move in the forward glide around an axis

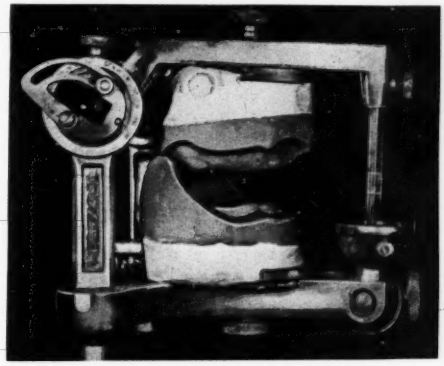


Fig. 4.—Hanau's articulator.

through the centre of the circle or circles concerned. This axis is situated upwards/forwards in relation to the condyle axis (*Fig.* 5).

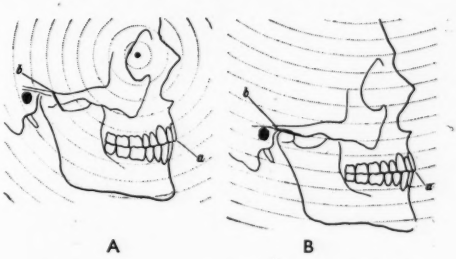


Fig. 5.—A, *a*, The overjet (no overbite); *b*, The condyle path coinciding with the circular arch of the occlusal curve (Hall); B, The condyle path coinciding with a circular arch concentric to the occlusal curve (Hall).

In the three other cases an overbite is presumed to exist.

2. When the overbite produces an inclination of the sagittal incisor path that is equal to the inclination of the condyle path, a protrusion will take place in the form merely of an

acceleration. The whole process results in a purely parallel displacement of the lower jaw, which movement has been called a translation (*Fig.* 6).

3. When the inclination of the incisor path is less than that of the condyle path, the lower jaw turns in its entirety around an axis

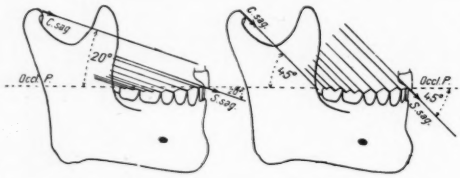


Fig. 6.—(Gysi). Shows parallel displacement during forward movement of the mandible when the incisal angle and the angle of the condyle path coincide.

situated approximately in the same area as the first example, i.e., forwards/upwards from the condyle axis (*Fig.* 7, right).

4. When, on the other hand, the incisor path is steeper than that of the condyle, an

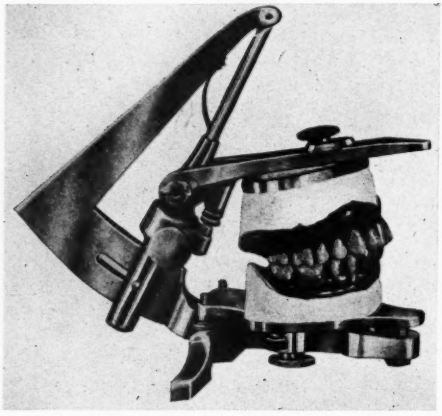


Fig. 8.—The Monson articulator.

acceleration will likewise occur, and the lower jaw will turn around an axis situated downwards/backwards in relation to the condyle axis (*Fig.* 7, left).

Certain articulators have been specially constructed with regard to an axis for a protrusive movement, among them the Monson articulator (*Fig.* 8) and the Hagman balancer, in particular.

In the Gysi Trubyte articulator, the Hanau articulator, and the instrument constructed

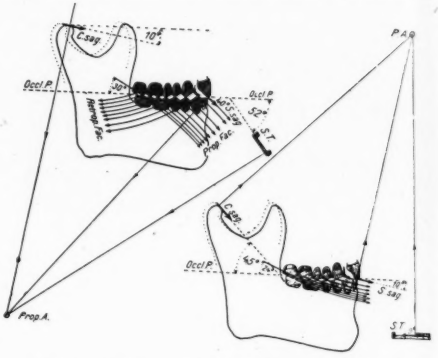


Fig. 7.—(Gysi). Position of the axis during forward movement varies with the incisal angle.

by me, no such axis has been applied, the variations in the protrusive movement being reproduced by an individual adjustment of the condylar guide and by means of a device for reproducing the incisal guidance. (*Figs.* 2, 3, 4.)

The incisal guide can be adjusted at different inclinations in the sagittal plane, by means of which the movement of the incisal pin may, in the individual case, be made to coincide with the incisal guidance. The inclination of the incisal guide in the sagittal plane in my instrument can be registered similarly to the graduation into different inclinations of the condylar guide. The same applies to the Gysi Trubyte articulator, but not to the Hanau instrument.

THE THIRD MOVEMENT

I will now deal with the third of the basic movements, i.e., the lateral movements. In order to obtain a more detailed conception of the movement or movements—considering that they occur on two sides—I shall begin by describing Gysi's original apparatus for recording them in cases of full denture prosthesis, owing to the fact that he was probably the first to register the lateral movements in this manner. In the median line of the upper bite

rim, Gysi fixed a registering point which could move on a small table applied to the anterior part of the lower bite rim. A layer of black, soft carding wax or soot covered the surface of this registering table. The bite rims were placed in the patient's mouth and he was

Fig. 9.—Gysi's registering point in the median line of the upper bite rim.

made to perform gliding movements in all possible directions. (*Figs.* 9, 10, 11.)

It was then found that the stylus traced a figure in the wax or soot layer of the table, resembling a rhomb (*Fig.* 12). When the pin is at the anterior point of this rhomb, the lower jaw is in its *central occlusion position*,

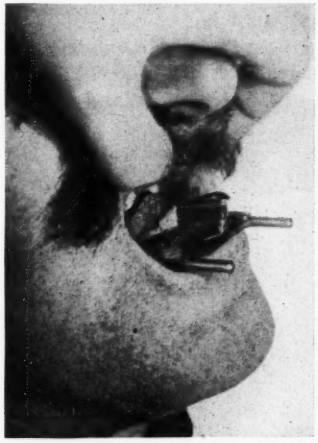


Fig. 11.—Bite rims with Gysi's apparatus in the patient's mouth.

that is to say, *when the condyles are at rest in their most retrusive position in the fossa mandibularis from where lateral movements can be made.* When the stylus follows one of the anterior sides of the rhomb, a lateral movement is performed which is called the extreme lateral movement towards this side. The angle formed by the anterior sides of the rhomb has been named the gothic arch. This

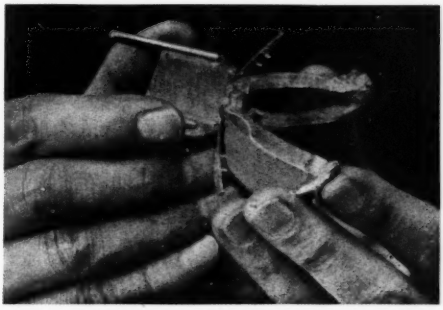


Fig. 10.—Gysi's registering table attached to the lower bite rim.

arch can be considered as a tracing of the extreme lateral movements of the point where the incisal edges of the central incisors of the lower jaw meet. This point has been referred

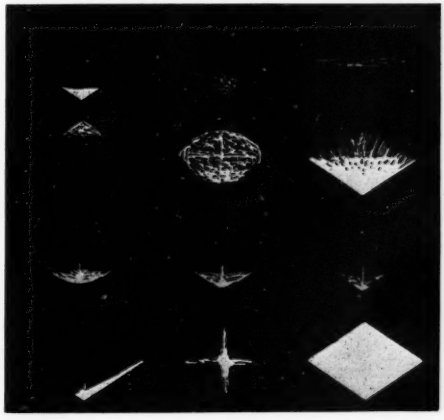


Fig. 12.—Various drawings made by the stylus. Perfect drawings are *f*, *i*, and *m*. In all other cases the patients are suffering from temporo-mandibular joint arthrosis to a certain extent, the movements in the joints being impeded (Gysi).

to as the median incisal point, or symphysis point. The movement track has been called the symphysis path. However, it should be emphasized that the design thus obtained represents the symphysis path in the case of

the movement of flat rims against each other, i.e., without the influence of cusps. When the teeth have been mounted, a slight opening movement is added at a lateral motion, caused by the height of the cusps. The gothic arch will then be another, somewhat wider, angle figure. The American scientist Stansbery was the first to pay attention to this fact. However, I do not propose to deal with that problem now, assuming that my readers are familiar with the Stansbery method. When the models have been mounted by means of the face-bow in my articulator, this variation of the gothic arch can be obtained directly (*Figs.* 13, 14).

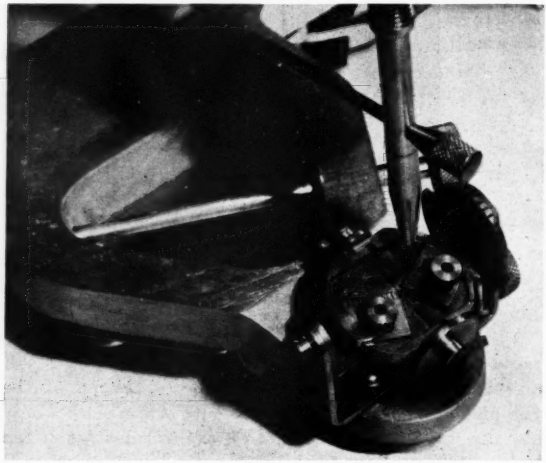


Fig. 13.—The incisal pin is in a lateral position resting behind the small plate on the incisal guide table. The two halves of the table are fixed in the horizontal plane corresponding to plane bite rims. The small plates are fixed in positions reproducing the individual gothic arch registered in a case.

In the Gysi Trubyte articulator this can be done, though less conveniently. In Hanau's articulator, on the other hand, which is not supplied with a means of reproducing the gothic arch (*Fig.* 15), this is impossible.

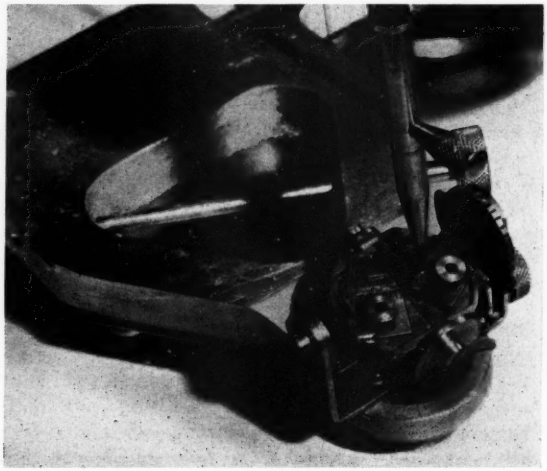


Fig. 14.—The two halves of the incisal guide table are now raised corresponding to the cusp inclines of the first molars, i.e., about 10 degrees on each side in relation to the horizontal plane. Now the incisal pin will not follow the margins of the plates. These must be arranged to a wider gothic arch angle. When they are moved to positions so that the incisal pin follows their margins again you will get the real gothic arch for setting up the teeth.

When studying a Trubyte articulator, or my instrument, a special device will be noted in the form of small plates applied to the incisal guide, rendering possible adjustment of the movements of the incisal pin in accordance with an individually measured gothic arch.

I have now briefly described the incisor path during lateral movements. This so-called gothic arch is not always the same but shows variations with regard to the size of the angle. In relation to a line in the sagittal plane, the angle may even be different on either side.

RELATIONSHIP BETWEEN GOTHIC ARCH AND JOINT MOVEMENT

I will now describe the variations of the gothic arch in different cases and then discuss the movements in the two joints that give rise to this gothic arch.

The different *functional positions*, as they have been termed in the title of this paper, arise from the various basic movements performed by the mandible. Apart from the central occlusion position, we notice a protrusive position and a right and a left lateral position. When the lower jaw is in a lateral position, the side to which it has deviated is called the working side. The opposite side is the balancing side. The balancing condyle always passes forwards/downwards on the tuberculum articulare, and at the same time inwards. The working condyle may in certain instances be assumed to remain in its resting position, only a torsion taking place in this case. It then forms the torsion centre of the whole mandible. However, as a rule this condyle also moves, though to a much smaller extent than the balancing condyle. In the majority of cases it shifts in a direction forwards/sidewards, the lateral movement predominating. It is considered capable sometimes of going backwards/sidewards, and even straight backwards and backwards/inwards. These variations in the direction of the movements of the two condyles cause the varying appearance of the gothic arch. The more protrusive the condyle path of the working side, the sharper is the angle formed by the arm of the gothic arch directed to the same side with a line in the median plane. According to Gysi, the size of the angle of the total gothic arch generally varies between 100° and 140°, but values of 90° up to 170° have also been registered. The inward movement of the balancing condyle and the outward movement of the working condyle cause the whole of the lower jaw to be displaced to the side of

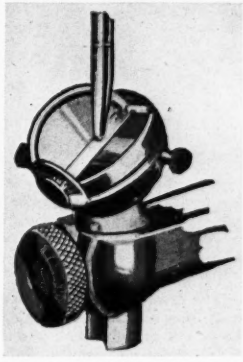


Fig. 15.—Universal incisal guide attached to the Hanau articulator (Hanau).

the lateral movement. This movement is generally referred to as the Bennet movement, after the English scientist who gave a description of it at the beginning of this century. It was, however, known long before then. This inward movement of the condyle of the balancing side varies, according to known investigations, from a few degrees up to 30° and more, from the sagittal plane. Hanau maintained that the angle stands in a certain relation to the inclination of the condyle path in the sagittal plane, according to the following formula:

$$B = \frac{H}{8} + 12$$

where H is the value of the sagittal inclination of the condyle path and B is the angle of lateral displacement during Bennet movement. It is regrettable that no analysis in favour of this formula has been presented, as far as I am aware, in the dental literature. Evidence in support of this formula would have been desirable. However, it has as a rule been accepted and I only know of

one scientist in the literature, Gysi, who has offered criticism, classifying it as basically wrong. In order to fix the individual, actual, value of this angle, it can best be found,

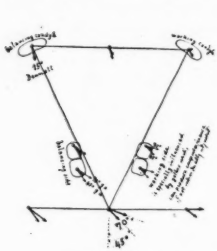


Fig. 16.

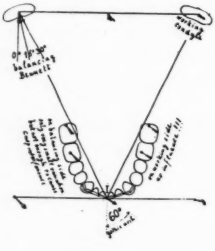


Fig. 17.

Fig. 16.—Extremes of different patients' lateral movements (shown by black triangles on the molars) when the halves of their gothic arches are either 45° or 70° in combination with an average Bennet angle of 15°. This shows the importance of registering any patient's individual gothic arch.

Fig. 17.—The drawing shows that if the Bennet angle is varied from 0° to 30°, the gothic arch being constant, there will be only small variations in the movements of a point on a molar of the balancing side, and no variations at all on the working side. Therefore Gysi fixes the Bennet angle at 15° (an average).

according to Gysi, by a geometrical construction. I shall not dwell upon the complicated mode of procedure. Those interested will find an excellent description in a work by Gysi and Köhler—*Scheff's Handbook of Dentistry*, published in Vienna in 1929. Gysi, however, states that this is one of the movements of the lower jaw where an average value can be applied even when a high degree of accuracy is wanted. (*Figs.* 16, 17.)

Gysi fixes this at 15°. My own instrument is adjustable at this movement from 0° to 30° but, in practice, I always use the 15° position. The Gysi Trubyte articulator and the Hanau instrument are adjustable from 0° to 20°. The mechanism for reproducing the movements of the condyles is similar in the Hanau instrument and in mine, that of the Gysi Trubyte articulator conforming, in principle, with them. Retrusion of the condyle of the working side can be performed in the Gysi instrument and in mine, but not in the Hanau articulator. This movement is, however, less distinctly reproduced in the Gysi apparatus than in mine. The mechanism in my articulator for the reproduction of a retrusive movement of the condyle is not a new one, deriving from an American articulator, not mentioned earlier in this paper, the Wadsworth instrument (*Figs.* 18, 19).

I shall now briefly refer to another movement which was mentioned in the beginning of this paper, namely, the so-called retropulsive movement. Gysi, in particular, urges the significance of grinding the teeth in a full denture prosthesis in order to harmonize with a movement where the lower jaw is slightly shifted backwards. This movement can be performed in the Trubyte articulator and, thanks to the Wadsworth condylar mechanism, in my instrument.

Broadly speaking, I have now accounted for the movements and functional positions

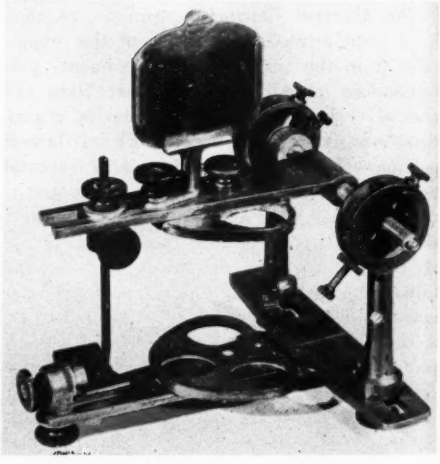


Fig. 18.—The Wadsworth articulator.

of the lower jaw and the consequent construction details of my instrument. In this connexion I will briefly describe the reproduction of the mandibular movements. An exact reproduction of the movement paths in each individual case cannot be made by means of the instrument described here. I wish to draw particular attention to the fact that the condyle path is never straight but manifests quite a number of different curves. In the

U.S.A. there is at least one articulator which is specially constructed to reproduce the individual movement path of the condyle. The instrument is, as far as I am aware, constructed by McCollum. Strictly speaking, the individual condyle path should, of course, be reproduced with minute correctness in our articulators, but in my opinion the registration of this path as well as the construction of the instruments would be too complicated for daily use (*Fig.* 20). The question is whether this would be worth while, except of course for scientific purposes. Considering that a lateral movement, for instance, in the region of the first molar, generally equals a maximum of 3 mm., it goes without saying that the deviations from the straight path traced by these articulators cannot be of any particular practical significance. For this reason, no attention has been

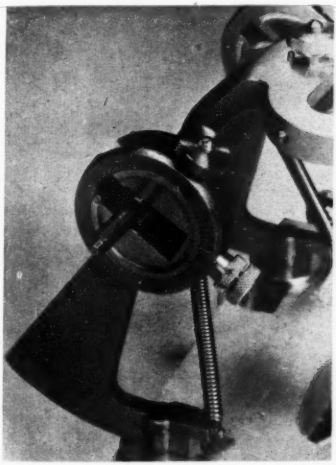


Fig. 19.—The condyle elements. When the thick screw is in the bottom the condylar ball will be in its central position. When the thinner screw, which perforates the former, is screwed into the bottom the condylar ball is forced backwards corresponding to a protrusive movement of the human condyle.

paid in my instrument to such individual variations of the condyle path. As regards the results of the different movements, in other words the functional positions, it may on the other hand be maintained that they are reproduced with great exactness.

Finally, only a few words will be said regarding other adjustment contrivances applied to my instrument. The two posts supporting the condylar mechanism can be placed at variable

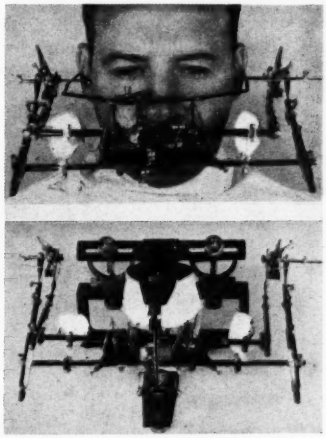


Fig. 20.—Registering apparatus according to McCollum (Simpson).

distances to each other, the instrument thereby being capable of adjustment according to the individual condyle distances. Experience has proved this to be of value in certain cases, the lateral movements in the individual case being in this way reproduced more accurately. This adjustment of the variable condyle distances is also possible by means of the Wadsworth articulator which is, in this respect, the model for my own instrument. Furthermore, the incisal pin has been supplied with an adjustment mechanism which I believe to be unique. The pin can be raised or lowered by means of screw attachments as well as moved in a sagittal direction, the extent of these displacements being directly recorded in tenths of a millimetre. Such registration of the displacement can also be performed in the condylar mechanism, where the screws are graduated for measurement of the extent of the displacements up to tenths of a millimetre. Such graduations do not, as far as I am aware, occur in any other instrument. Thanks to these screws, the upper part of the articulator can be adjusted to different positions in relation

to the lower part, corresponding to the different functional positions of the lower jaw. In addition, these records permit the registration in mathematical values of the various positions. Therefore, should the checkbites in a certain case have been destroyed or lost, the functional positions can nevertheless be reproduced, provided the record has been registered and the values noted down.

Hanau formula is almost always incorrect. (*Fig.* 21.)

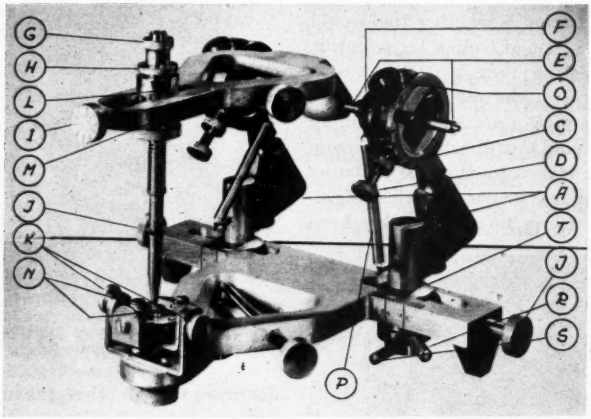


Fig. 21.—The latest model of the author's articulator with new elements for reproducing the individual Bennet angle. There are two locknuts (*R*) and (*S*) for adjusting each condylar post : one for rotation movements around the central vertical axis of the post, and one for locking the post when the intercondylar distance is to be adjusted. When a checkbite in an extreme lateral position is placed between the teeth of the plaster models or between the bite rims in full denture cases and the locknut (*S*) is released, the condylar post will turn from its positon in the sagittal plane to another position and the Bennet angle is registered by the graduated baseplate (*T*).

Summing up on the basis of previously mentioned facts I venture to maintain that the articulator constructed by me, without being particularly complicated in its practical construction, with regard to bite analysis, full denture constructions, and partial restorations fulfils all the requirements which arise from our present knowledge of the movements and functional positions of the lower jaw.

My articulator now described has been used for investigations and in my daily practice since 1932. Some new modifications have been made so that I am able to register and reproduce directly in the instrument the individual Bennet angle, particularly in full denture cases. Experience has shown that the value of the Bennet angle obtained by using the

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A USE FOR OLD PROBES

A broken hook probe can be converted into a useful root canal plugger, or ordinary amalgam plugger for fine fissures, by grinding the broken end off square to the required length or diameter.

THE ANATOMY OF OPERATIVE RISKS ARISING FROM UNGUARDED DISKS

By **ERIC A. SCHER**, M.B., M.Sc., B.D.S., F.R.P.S.

AND

W. F. M. FITZGERALD, M.B.

From the Department of Anatomy, University College, Cork

DIAMOND disks are used in dental surgery for many purposes; in general these bring the rotating disk near soft tissue. In two cases it tongue has been pulled aside so that the important parts can be more easily seen. The position of structures important to us

Fig. 1.—Dissection of mouth from inside showing structures likely to be injured by an unguarded disk. GPN, Greater palatine neurovascular bundle. SB, Septal branch of superior labial artery. SLA, Superior labial artery. FAV, Facial artery and anterior facial vein. ILA, Inferior labial artery. SGD, Submaxillary gland and duct. LNA, Lingual nerve and artery. RSA, Ranine and sublingual arteries.

is known to one of us (E. A. S.) that severe damage was caused by such a disk being deflected from the surface of the tooth on to the neighbouring tissue. We think it worth while, therefore, to give a short account of the relevant anatomy.

This anatomy is shown, we hope clearly enough, in *Fig.* 1. This is a photograph of a dissection of the right half of a head which has been sectioned in the median plane. The has been indicated by outlining them with Indian ink.

It will be obvious to the reader that there are four "danger areas"—palatal, buccal, labial, and paramandibular. In the palate, branches of the greater palatine neurovascular bundle are the chief structures to bear in mind; they are very near the surface and have occasionally been injured. In the buccal area, the buccinator muscle is in immediate danger;

should this be cut through, both the facial artery and the facial vein are liable to trauma. Theoretically at least, the parotid duct with neighbouring branches of the facial nerve could be injured: it is unlikely that the patient would allow the disk to go so far without some protest. In any case the effusion of blood would be enough to warn the operator.

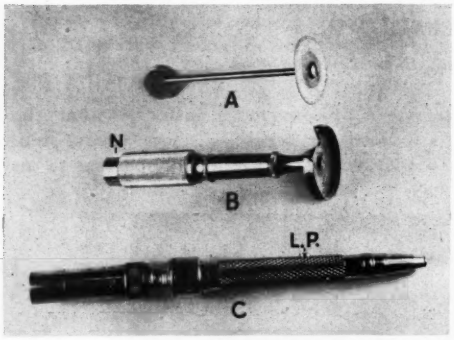


Fig. 2.—A, Diamond-faced disk screwed on extra long mandrel. This fits into the disk guard, B. The notch (N) on the barrel slips over the locating pin (LP) of the handpiece, C.

As *Fig.* 1 shows, the branches of the facial artery to the lips lie half-way between the mucous membrane and the skin, and are in the neighbourhood of a "slipped rotating disk".

Injury to the paramandibular structures could occur either on the buccal or the lingual side of the bone. The first has been considered already. In practice, the tongue is the most likely structure to be injured on the lingual side. The branches of the ranine vessels go both to the tongue and to the gum. These branches are very abundant indeed, like the comparable branches of the lingual nerve; hæmorrhage from them could not be checked by pressure on the main trunk against any neighbouring structure. One cannot rule out possible damage to the submandibular (Wharton's) duct; the customary undergraduate method of dissection masks the proximity of the structure to the mucous membrane of the floor of the mouth. It is easier to recollect this fact by remembering the intimate association of the duct to the lingual nerve—which nerve, by the way, ought to be called the *nervus ad solum oris*, the nerve to the floor of the mouth.

Should an operator, using an unguarded disk, be so unfortunate as to produce a wound cutting through from mucous membrane to skin anywhere in the buccolabial region he will, of course, have caused extensive damage to all the facial muscles of that area which converge on the modiolus, and skilful plastic surgery may be necessary to repair the cosmetic as well as the functional injury. The medico-legal implications need no stressing.

Fig. 3.—Diamond-edged disk, protected by guard, approaching upper left lateral incisor.

We venture, therefore, to suggest that more extensive use be made of a guarded disk. The parts of one such guard are shown in *Fig.* 2; it is shown in use in *Fig.* 3. The reader can see at once how effective is the protection afforded to the neighbouring soft tissues.

We wish to thank Professor M. A. MacConaill, Director of the Department, for his interest and advice.

XIth INTERNATIONAL DENTAL CONGRESS of the FEDERATION DENTAIRE INTERNATIONALE, LONDON, JULY, 1952

THE Organizing Committee have decided to reduce the subscription to £2 15s. for any Officer of the rank of Major or below, or its equivalent rank, and for members of the staff of Dental Schools.

Enrolment forms must be endorsed and Officers must attend in uniform.

PARLIAMENTARY NEWS

Dentists' Bill

When the House of Lords went into committee to consider the Dentists' Bill, Lord Nathan moved a series of amendments, which, he said, were designed to have expressed in the Bill the code under which the dental disciplinary committee was to act. "The Bill sets up the committee, and it is desirable that the code to be operated by the committee should itself be expressed in the bill," he said. "The Bill, however, 'imports' the disciplinary code or matters relating to it by reference to earlier statutes."

As the Bill stood, it was difficult for a practitioner to find out the disciplinary responsibilities of the committee, without referring back to the Acts of 1878 and 1921. "This might easily lead to unnecessary recourse by the practitioner to his legal advisers."

"The statute should be sufficiently clear as to enable the practitioner to find out from the actual reading of it what is actually intended."

The Lord President of the Council (Lord Woolton) replied: "When I read the Bill myself I was a little concerned about this because I never liked legislation by reference".

However, his inquiries revealed that no practitioner was really worried about this because they knew what was and what was not professional conduct. They learned their code when they took their professional training. Lord Woolton added: "But I have consulted with the department and they are prepared as soon as the convenience of Parliament makes it possible to make a consolidation of all these dental acts". This, by making one act of all those now on the statute book, would meet Lord Nathan's point.

Lord Nathan said that this proposal met his objections, and withdrew his amendments.

Lord Woolton moved an amendment which, he said, the Government had introduced as a result of observations made during the second reading debate on the Bill. "This amendment makes it quite clear that examinations to be arranged by the general dental council to test the knowledge and skill of foreign dentists shall be actually held by a dental authority", he said.

The amendment was agreed to.

Lord Woolton moved another amendment whose purpose was to prevent hardships being incurred by a small group (about 30) of foreign dentists in this country. His amendment was to add to the bill the provision that: "The Council may direct that a particular person who has passed the examination required to obtain a foreign diploma shall be treated as a person holding a foreign diploma".

Lord Woolton said: " The group concerned are people who passed their examinations in the countries in which they were trained, but for political or religious reasons were deprived of their diplomas".

Viscount Jowitt said there was a small group of Jewish refugees from Hitler who came in the category concerned by the amendment. Unfortunately, these people might not now have practised dentistry for some considerable time. "This ought to be considered by the general council", he said. "It might be necessary to impose some sort of refresher course on these people to see thay get back the understanding and skill they had before."

Lord Woolton: "I should have thought that that point was already covered by the powers of the general dental council".

The amendment was agreed to.

Lord Silkin moved what he described as a controversial amendment, to put upon the general dental council set up by the Bill an obligation within twelve months to make regulations for the creation of a specific type of dental auxiliary . . . a technician who would be permitted under suitable safeguards and with proper supervision to do the work of making a mouth impression, fitting it, measuring and completing it. At present, this type of technician made the teeth, but only as a result of impressions made by the dentists themselves.

"This amendment will not be welcomed by the dental profession", he said. "They have

a vested interest in the making of dentures and they very naturally regard themselves as being qualified to carry that work out, and no-one else. They have made public a number of objections to this amendment."

He said no dental technician was going to be forced to qualify, to go on the register for the purpose of being permitted to fit teeth. Those not willing or qualified to do so would not apply to go through the training course. It was expected some 2,000 technicians would be prepared to undergo the necessary training which would permit them to become registered as technicians.

An objection raised was that fitting of teeth and taking impressions was so highly skilled that only qualified dentists should do it. This, he imagined, was the gravamen of the objection. Was it true? The dental profession went so far as to say that even with a perfectly fitting set of teeth it might be dangerous to the mouth and create serious consequences unless the fitting was carried out by a dentist.

He found it very difficult to believe this. It might be there were certain exceptional types of mouth where it would not be appropriate for dental technicians to take the impression. The proposal was that in all cases before a technician was permitted to take an impression it should be approved by a dentist.

If they issued a certificate it was for the patient to decide whether he preferred to go to a dentist or a technician. He could not feel there was any real weight behind the objections that the amendment was against public interest. The amendment merely required that regulations should be made and they could contain any reasonable safeguards for the protection of the public.

Unless something was done they were accepting the position of a permanent shortage of dentists. The need for dentistry was grave; people were becoming more and more teeth conscious and realizing the vital importance of sound teeth to the nation's health.

Lord Milner, supporting the amendment, said he had been told that so far under the health scheme it had not been possible to put the dental services on a proper footing in regard to expectant mothers, and the school dental service was also much handicapped by the lack of dentists.

Lord Teviot said it was a matter for the dental council. Fitting and measuring of dentures was often done in conjunction with the teeth position in the mouth which a dental mechanic could not know about. It was a matter for a highly skilled dental surgeon.

He understood there were two appropriate unions affiliated to the T.U.C. who did not wish any change in the present and best set-up in this connexion between the dental surgeon and dental mechanic.

Lord Mancroft called it a dangerous amendment, and referred to an allegation made on a previous reading of the Bill that certain work was carried out by some technicians which should be done by qualified dentists and was illegal under the Dentists Act, 1921.

He had had a reply from the Dental Association saying this was untrue. The dental technicians said the allegation was very largely true. It was not for the House to settle the squabble but if it was not the law it should not be allowed.

The proposal would be bringing the dental profession down to the level of a trade. There was a great deal of surgical skill required. Seven out of ten cases might be straightforward, the other three might need all the skill of an experienced dentist which a technician could not have.

Lord Webb-Johnson urged the Government not to accede to the amendment. The House of Lords was not a suitable body to decide whether technicians or professional men wished this or that particular thing. When there were dangers in carrying out a procedure it should be in the hands of a qualified professional man.

Lord Woolton (Lord President of the Council) said he could not accept the amendment. He explained that the Bill's whole purpose was to give a certain status to the dental profession comparable to that of the medical profession. The General Dental Council could if it desired recognize these people.

There was a clash between Lord Woolton and Lord Burden when the Earl of Onslow

moved a Government amendment "that ancillary dental workers of a class permitted by the regulations to undertake the extraction or filling of teeth are only employed to do work of that kind in the course of the provision of national and local authority health services".

"I regard this as one of the most reactionary amendments I have ever read", said Lord Burden.

"For those who are under the scope of the National Health Service and the school medical service a cheap, inferior type of dentistry is provided by people who are not fully qualified to act as dentists.

"The amendment actually precludes dentists practising on their own and all who are outside the National Health Service from employing these ancillaries to do work, but they can be employed by dentists within the scope of the National Health Service.

"If ever there was one provision for those who can afford it to go to Harley Street or so on, and another form of dentistry for those who are within the N.H.S. . . . well, then, find me anything like it."

Lord Onslow pointed out that a large number of people subscribed to treatment under the National Health Service.

Lord Burden retorted: "I suggest this amendment excludes these ancillary workers from working with dentists who are outside the N.H.S. I suggest here is a deliberate attempt by people who know what they are doing to provide a cheap service under the National Health and school medical services as against fully qualified people.

"I regard this amendment as one of the most reactionary amendments I have seen."

Lord Woolton: "Lord Burden knows perfectly well that the National Health Service is not a class service, and here he goes and makes a class-hatred speech. I regret that he made it".

The Government amendment was agreed to.

Lord Woolton moved a long and detailed amendment to give dental companies a right of appeal to the privy council against a decision of the general dental council to remove their right to continue in the business of dentistry, where an offence had been committed by one of their operating staff, or one of their directors.

Lord Woolton said: "The Government considers that the growth of these companies is rather undesirable". From 1922 to the end of 1948 the number of companies remained at the same level. "But since the National Health Service started, 37 new dental companies have come into existance—13 of them since the introduction of this Bill. There are now 62. It is a development which the Government looks on with very little favour."

The amendment was agreed to.

The Committee Stage of the Bill was concluded. (*T.*, *March* 4.)

SOCIETY NOTES

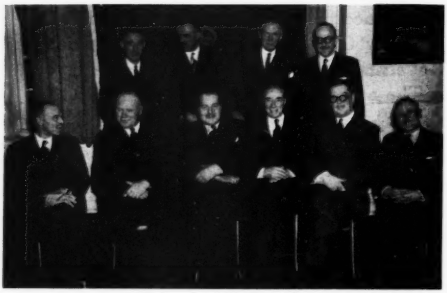
THE TWO FIFTY CLUB

THE Sixth Annual Reunion Dinner of The Two Fifty Club* (Non-Regular Ex-Officers, Royal Army Dental Corps), was held on Saturday, Jan. 26, 1952, at the Victory (Ex-Services) Club, Seymour Street, Marble Arch, London, W.2. A very enjoyable evening was spent by all and many old associations were renewed. Speeches were cut to the minimum in order that the eager and steady flow of conversation would not be interrupted. Following the Loyal Toast, the President, Brigadier R. A. Broderick, D.S.O., M.C., T.D., proposed the toast of "Our Guests". Major-General J. Wren, Director of Dental Services, the War Office, replied on behalf of himself and his fellow guests, Major-General A. B. Austin, C.B., Representative Colonel Commandant, the Royal Dental Corps, and Colonel W. P. Duguid, Colonel Commandant. The Chairman, Captain T. Lorimer White, Leicester, announced that he would be succeeded in office by Major C. R. H. Fenton, Nottingham, and thanked the Secretary, Major J. W. Cooper, for all the work he had done in making the arrangements for the Reunion. The Seventh Reunion Dinner will be held on Saturday,

* The title of the Two Fifty Club refers to the expected number of fillings per officer per month.

Jan. 31, 1953, of which an announcement will be made later and members will be notified.

The Two Fifty Club was formed on Dec. 6, 1946, with the object of encouraging all non-regular officers who served with the Army Dental Corps during World War II to keep in touch with each other by organizing a dinner to be held annually in London. Leicester and District members of the Club hold an annual dinner and propose to hold it in November of each year. It is hoped that in time other districts will follow.



Left to right:—*Standing*, Major L. G. Hitching, T.D.; Lt.-Colonel V. W. Humpherson; Brigadier R. A. Broderick, D.S.O., M.C., T.D., *President*; Captain P. F. Moran. *Seated*, Major-General A. B. Austin, C.B., *Representative Colonel Commandant*; Major-General J. Wren, *Director of Dental Services, The War Office*; Captain T. Lorimer White, *Chairman*; Colonel W. P. Duguid, *Colonel Commandant*; Major J. W. Cooper, *Secretary*; Captain C. H. Rubra, *Treasurer*.

Present Officers:—

President: Brigadier R. A. Broderick, D.S.O., M.C., T.D.

Chairman: Major C. R. H. Fenton.

Treasurer: Captain C. H. Rubra.

Secretary: Major J. W. Cooper.

Asst. Secretary: Major L. G. Hitching, T.D.

Committee: Captain R. W. Birkett, Lt.-Col. V. W. Humpherson, Major A. S. Peters, Major L. C. Proctor, Captain P. F. Moran.

The Victory Club was founded to serve as a memorial to all ranks of all branches of the Services of both World Wars. Most branches of the Forces hold reunion dinners there. Sleeping accommodation is available, the majority of the bedrooms having been endowed by some unit of the Forces.

The Two Fifty Club intends launching an appeal to all who served with the A. D. Corps as non-regular officers to endow a bedroom in memory of those who were killed or died on active service on the home and other fronts.

The Two Fifty Club hold a "Get Together" at 7 p.m. on the second Thursday of each month at the Victory Club. If you are eligible why not come along?

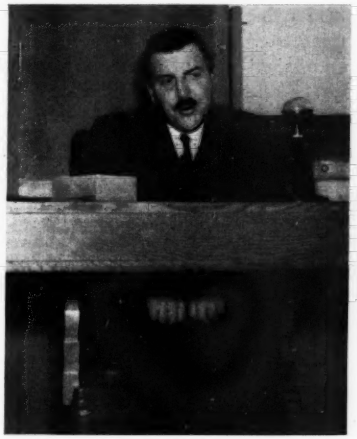
INSTITUTE OF BRITISH SURGICAL TECHNICIANS (INC.)

Dental Section

MR. R. V. P. CAMPBELL, H.D.D., L.D.S., gave an address at the Eastman Dental Hospital, on Tuesday, Feb. 12, on "Bridge Work" to a

representative gathering under the Chairmanship of Mr. Chas. B. Phillimore.

Mr. Campbell described the physiological and mechanical requirements to be observed in the consideration of a dental bridge and proceeded to classify the types of bridges—fixed, fixed-movable, and removable—and the conditions indicating or contra-indicating their



Mr. R. V. P. Campbell, H.D.D., L.D.S.

use. Continuing with the preparation of cavities and inlays, the investment and casting of the model, with due consideration of the material best suited to produce a minimum amount of contraction and resistance to breakage, he proceeded to deal with the design of pontics, with the factors conditioning the selection of the various types and the preparation and choice of abutments, concluding with observations on new developments in bridge work.

A number of questions from the audience were very adequately dealt with by the lecturer and Mr. Campbell was warmly thanked by the Chairman for his excellent paper. Finally, those interested were invited to examine various specimens and to ask further questions round the table.

A LECTURE will be given by Mr. Gilbert J. Parfitt, F.D.S. R.C.S., on "The Use of X-rays in Dentistry", on Tuesday, April 22, 1952, at 6.30 p.m., at the Eastman Dental Hospital, Gray's Inn Road, London, W.C.1.

Admission tickets are obtainable on sending stamped addressed envelope to the Institute, 6, Holborn Viaduct, London, E.C.1, or through members.

NEWTON HEATH TECHNICAL COLLEGE

Applied Science Department

At a meeting of the Manchester and District Joint Training Committee for Dental Technicians, book prizes were presented to the most

Left to right :—*Standing*, Messrs. Altham, Baxter, Vernon, Roundhill (Lecturer, Dental Technology), Ward, and Lane. *Seated*, Messrs. Roe (Head of Applied Science Dept., N.H.T.C.), Coady (B.D.A.), Dockree (B.D.A.), Kenyon (S.I.M.A.), Holland (U.S.D.A.W.), and Whitehead (U.S.D.A.W.).

successful dental technician students of Newton Heath Technical College.

The prizes were provided jointly by the East Lancashire and Cheshire branch of the British Dental Association, the local Dental Committee, and the Manchester and District branch of the U.S.D.A.W. Associated Dental Technicians.

GIBBS TRAVELLING SCHOLARSHIP

The first Gibbs Travelling Scholarship has been awarded to Mr. P. M. C. James, L.D.S., following his presentation of a thesis entitled "Dental Health Education for the Public as a Factor in Preventive Dentistry" and an interview before a Committee elected by the British Society of Periodontology. He will travel to Scandinavian countries for a three-month period beginning in April with the objective of studying oral hygiene methods.

The winning thesis is given on page 228.

ABSTRACTS
from Other Journals

Factors influencing Denture Function

Twenty patients were selected having full artificial upper and lower dentures which were of satisfactory stability, retention, and vertical dimension. The degrees of efficiency of the dentures under different conditions were deduced from the percentages of weighed quantities of peanuts and carrots passing a ten-mesh screen after chewing. The tests showed that the degree of fragmentation of the food when judged acceptable for swallowing by each subject was consistent throughout the tests, but varied widely as between patients, being related to individual efficiency. The use of adhesive gave observable but not statistically significant increase in efficiency, and reduction in chewing strokes before swallowing. A marked rise in efficiency resulted from compulsory increase of lateral movement in each subject (save one), but differences in the normal amplitudes observed in the various patients could not be related to comparative efficiencies.—MANLY, R. S., and VINTON, PAUL (1951), *J. prosthetic Dent.*, **1**, 578.

A Comparison of the Cutting Efficiency and Heat Production of Tungsten Carbide and Steel Burs

This is a report of an investigation on a scientific basis into the clinical advantages of tungsten carbide burs over steel burs. The two factors investigated were the rate at which tooth substance was cut and the rate of heat production, for it was felt that the instrument which cuts faster is less time-consuming at the chairside and the less heat produced is less painful for the patient. A later report is to be given on pulp reaction.

In testing the comparative efficiency of these two types of bur, an assessment was made by estimating the amount of heat produced per unit mass of tooth substance cut. The procedure and apparatus for these experiments is fully described. They were performed on human enamel and the greatest care was taken to control the possible variables.

The conclusions showed that the tungsten carbide bur cut faster, lasted longer, and produced less heat per unit mass of enamel cut than the steel bur. Microscopical examination of the burs after controlled cutting revealed that whereas the tungsten carbide bur had retained its fine edge, considerable wear had taken place on the edge of the steel bur. The wearing of the steel bur accounts for its short life and the greater heat production. The size of enamel particles collected during cutting were also examined microscopically. The greater particle size from the tungsten carbide bur confirmed the superiority of this bur over the steel bur with its smaller size particle.—LAMMIE, G. A. (1951), *Brit. dent. J.*, **90**, 251.

NATIONAL HEALTH SERVICE NOTES

(Service Committee and Tribunal) Regulations, 1948
Decision of Tribunal

The National Health Service Tribunal for England and Wales has decided that the name of Mr. James Herbert Maginn, 16, Grant Road, Liverpool, 14, must be removed from any dental list in which it is now included, and may not be included in any dental list until the Tribunal or the Minister directs to the contrary.

Medical, Dental, Pharmaceutical and Ophthalmic Lists to Post Offices

The Executive Council in sending future amendments to the medical, dental, pharmaceutical, and ophthalmic lists to Post Offices will arrange for them to be prepared in two parts, (*a*) Additions, (*b*) Deletions and amendments.

The Post Offices will file (*a*) as supplements to the main lists and carry out (*b*) as corrections on the main lists. The General Post Office will take steps to ensure that members of the public consulting the Lists will be advised of the existence of the supplements.

THE PROCEEDINGS OF THE BRITISH SOCIETY OF PERIODONTOLOGY

President: S. CRIPPS, L.D.S. R.C.S. Eng.
Hon. Secretary: H. THOMSON, L.D.S. R.F.P.S. Glas., H.D.D. R.C.S. Edin.
53, Portland Place, London, W.1.
Vol. II, No. 3 April, 1952

TOOTHBRUSH REPORT

ON Feb. 21, 1951, the Council of the British Society of Periodontology set up a working party to investigate the possibilities of producing a standardized toothbrush acceptable for general use and to bring about the exemption from Purchase Tax of toothbrushes. Mr. Colin Davis was elected Chairman of this working party and Mr. Bryan Wade Secretary.

The help of Mr. Hugh Linstead, M.P., was enlisted with a view to designing a utility toothbrush, and as Vice-Chairman of the all-party Medical Committee, he promised his support provided the design would satisfy the British Society of Periodontology, the British Dental Association, the Ministry of Health, and the British Brush Manufacturers Association. The Ministry of Health and the British Dental Association also promised their support. The British Brush Manufacturers Association, however, maintained that, as there was a more than adequate supply of toothbrushes on the market of sufficiently varied design and price range, no useful purpose would be served by the introduction of a utility toothbrush. Without their support no good purpose would be served by proceeding further.

The working party then turned its full attention to the objective of abolishing the Purchase Tax on the toothbrush. During a visit to the Eastman Dental Hospital, Mr. Julian Snow, M.P., was made aware of this project and, on being supplied with all the facts by the British Society of Periodontology, he made a speech during the second reading of the Finance Bill on May 8 and drew the attention of the House to the value of the toothbrush in oral hygiene, and to the iniquity of the Purchase Tax on it.

The President of the British Dental Association was approached to write to the Minister of Health and all members of the British Society of Periodontology were asked to write to their respective M.P.s requesting their support for the toothbrush when amendment to Purchase Tax was presented for discussion during the third reading of the Finance Bill. Further support was again assured by Mr. Hugh Linstead, M.P., and by Dr. Charles Hill, M.P. A letter was written to *The Times*, but space could not be found for it.

In the House of Commons on June 20, Mr. Martin Lindsay rose to move that Purchase Tax be removed from toothbrushes. He was followed by Mr. Julian Snow, who reiterated the points made in his earlier speech during the second reading.

Replying for the Treasury, Mr. Douglas Jay said:

"The real reason why the Government in recent years have hesitated to exempt toothbrushes is mainly that it was felt to be doubtful whether a distinction could be made between the toothbrush and the other brushes my hon. friend mentioned—hair brushes and so forth. [Hon. members, 'Oh'!] I gather, however, from the comments from the Committee generally that it is now the view of the Committee that a perfectly firm distinction can be made between the toothbrush on the one hand and these other brushes on the other. On that understanding, and if that is the view of the Committee, I think a clear case has been made for considering the exemption of toothbrushes from tax."

As from June 21, 1951, toothbrushes were exempt from Purchase Tax.

PERIODONTAL DISEASE

Report of a Lecture entitled " Diagnosis and Classification of Periodontal Disorders ", given by Mr. P. A. Trotter, B.D.S., H.D.D., at Newcastle upon Tyne, on Feb. 9, 1952

MR. TROTTER, in the course of introduction, said that it was as well to remember the supporting tissues of the teeth and that more time should be devoted to the foundations upon which the superstructures depended. Periodontics was a complete subject in all its branches and a detailed examination and diagnosis were essential in unravelling the complicated aetiological pattern which occurred in so many cases. It was necessary to understand the biological picture, for it was upon this that sound treatment planning was based. Indeed, one should not only examine the whole of the mouth in detail but it should be realized that the oral cavity was a part of the body and therefore the field was often a wide one.

Nomenclature and classification were perhaps the least important in the study of the disorders of the periodontium, for it mattered little what the dental surgeon called the disorder as long as he was able to understand its aetiology, pathology, etc., and to establish a satisfactory treatment plan. Nevertheless, nomenclature and classification were useful inasmuch as they enabled colleagues to discuss this complex disease with each other.

The speaker said that he now wished to present *a* classification to the meeting. It may not be *the* classification, but he considered that it would help in determining a correct diagnosis and treatment plan.

Classification was given as follows:—

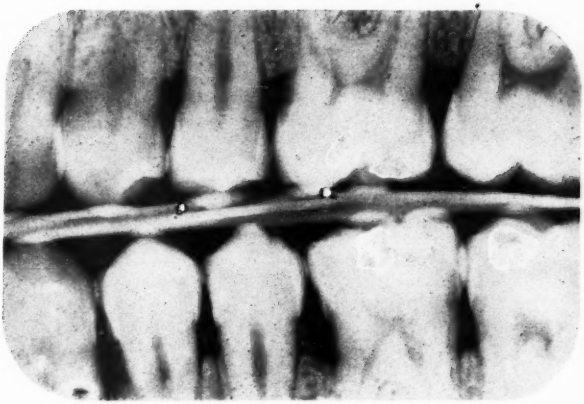
1. GINGIVAL ABRASION.
2. GINGIVAL RECESSION.
3. GINGIVITIS:—
   a. Acute:—
      Vincent's Infection { Acute / Subacute
      Streptococcal
      Staphylococcal
      Herpetic
      Desquamative
      Catarrhal
      Systemic: Drugs; Avitaminosis; Blood disorders; Endocrines
   b. Chronic:—
      i. Hyperplasic (Hypertrophic)—presenting False Pockets.
         Local Causes: Open lip habit; Mouth breathing, etc.
         Systemic Causes: Epanutin Therapy
      ii. Atrophic—presenting True Pockets.
         Local Causes: Lack of oral hygiene; Food impaction; Calculus; Overhanging fillings, etc.
         Systemic Causes: Drugs; Avitaminosis; Blood disorders; Endocrines, etc.
4. SIMPLE CHRONIC PERIODONTITIS.—Progression from chronic gingivitis where *local* factors are responsible.
5. COMPLICATED CHRONIC PERIODONTITIS.—Progression from:—
   a. Chronic gingivitis where *local* and *systemic* factors responsible.
   b. Simple periodontitis with an added *systemic* factor.
   c. Periodontosis with added *local* factors ensuing.
6. PERIODONTOSIS.—A state of the periodontium where the breakdown occurs primarily in the deeper tissues.
7. ATROPHY.—May be a continuation from gingival recession, the deeper structures being involved.
   Presenile
   Senile
   Disuse
   Excessive stress (Traumatogenic Periodontitis)
8. LATERAL PERIODONTAL ABSCESS.—Periodontal abscess.
9. MISCELLANEOUS.—
   Hypercementosis—Cementoma
   Odontoclasia—Odontoclastoma
   (Idiopathic absorption)
   Epulides, etc.

Mr. Trotter then illustrated each of the conditions mentioned in the classification by an excellent display of sixty colour transparencies.

Issued with "The Dental Practitioner," April, 1952, Vol. II. No. 8

RADIOGRAPHIC CHART No. 1. (FOR YOUR PATIENT'S INSTRUCTION)

DETECTION OF EARLY CARIES



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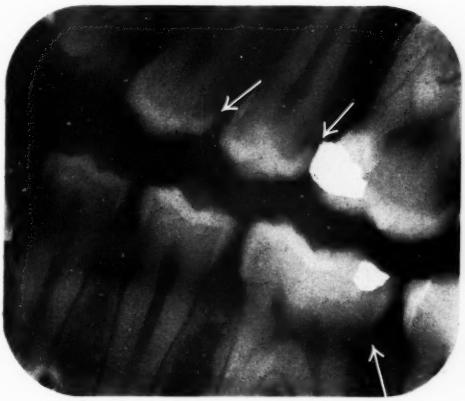


B

C

A. Bite-wing radiograph showing no caries: B. Showing early caries: C. Apical radiograph showing caries at a later stage—the pulp has been exposed.

OFFICIAL SUPPLEMENT OF THE

SURGICAL INSTRUMENT MANUFACTURERS' ASSOCIATION (INC.)

DENTAL LABORATORIES SECTION

Chairman: E. G. EMMETT, F.I.B.S.T.

Administrative Offices: 6, HOLBORN VIADUCT, LONDON, E.C.1

Telephone: CITY 6031

Vol. II, No. 1 April, 1952

Editorial Committee: MR. D. M. BEAUCHAMP; MR. H. J. POTTER, F.I.B.S.T.

EDITORIAL

WE acknowledge the co-operative spirit of the Editors and Publishers of this journal in enabling us to make known our activities, through the pages of the *Supplement*, and in affording our members the opportunity to express details of their technical experience.

Despite the anxieties all those connected with dentistry are experiencing, we feel every reason for some excitement, in that this number marks the anniversary of our first *Supplement*.

Throughout the year the Editors have been encouraged in many ways to continue their attempts to present the requirements of our members and to interest others who may read it. They feel that to some extent they have succeeded.

Changes have been necessary, as you will have observed, and whilst we are assured of another successful year, we shall be ever mindful of the grand initial effort of one of the first Editors, Mr. C. M. Booth. We appreciate and thank him for his work, and our members will offer his successor, Mr. D. Martin Beauchamp, every encouragement.

And now to the Conference Week-End—there is so much to report.

WEEK-END CONFERENCE DINNER

FOR the third succeeding year members gathered at the Holborn Restaurant on the evening of Friday, Feb. 8, to set off a pleasant and profitable social-business-technical week-end.

Our national Chairman, with Mrs. Emmett, waited in the ballroom, and very gracefully received our official guests, members, their friends, and ladies.

The excellent manner in which men from all over the country supported the effort, and the value set upon the activities of the Association, was evident as we heard the announcement of travellers from Glasgow, Cardiff, Hove, Hull, Hastings, Manchester, Bradford, and Birmingham. A sample of the provincial enthusiasm was displayed by Mr. Ditchburn and his wife, who had set out from Liverpool at 3.0 a.m. in order to be present, stay the night in London, attend the two Saturday meetings, and return home on Sunday.

Following the reception we proceeded to the banqueting hall, where an excellent dinner was served to the company, numbering one hundred and sixty-three, among whom were the Association's guests—Mr. C. G. Spiridion, F.D.S. R.C.S., President Elect of the B.D.A., Mr. J. E. Seear, L.D.S. R.C.S., editor of the DENTAL PRACTITIONER, Mr. H. D. Barry, of

the B.D.A., Mr. S. G. Davis, O.B.E., LL.B., our legal adviser, and Miss D. Sawers, our Secretary. Other guests of whose presence we

Mr. and Mrs. Eric G. Emmett receive Mr. H. Guy Drew.

were glad were Mr. H. Guy Drew, Mr. G. Maurice Down, and Mr. T. M. Proudfoot, M.B.E.

At the close of the dinner, Mr. Raymond Mather proposed the toast of the guests, to which (in the absence through illness of Mr. J. M. Hooker, President of the Association of Dental Manufacturers and Traders), Mr. Seear replied with very well chosen words.

Mr. Spiridion then proposed the toast of S.I.M.A., expressing keen interest in the education of apprentices and deploring the general loss of manual dexterity by the modern mechanical aids.

Mr. Emmett then said he was privileged to reply on behalf of the D.L.S. of S.I.M.A., and to preside for the third time. He thanked those present for their acclamation to the toast, and Mr. Spiridion for the generous way in which it was proposed. He said that as the emphasis was on "brevity" it would be impossible to deal with the response as it deserved. In pointing out that the laboratories of the Association filled an important place within the dental service, he said that whilst the dental practitioner applied his skill largely to surgery, the laboratories applied their skill and experience to the fabrication of dental appliances to replace defects and losses in the facial structure, and that our members were fully aware that they were expected to produce these appliances and to keep absolutely up to date in the specialized branches of prosthetic dentistry—this was most certainly the case, and indeed it was impossible to conceive a complete dental service without them. It was the aim of this organization to do all it could to improve a standard of craftsmanship which was as high as that of any country in the world and in fact higher than most; the efforts in this direction had been proved to some considerable extent in various ways—by members lecturing on matters connected with the dental craft in various parts of the British Isles, acting as instructors in the many colleges, by accepting representation on the many educational committees, acting as examiners in dental technology, etc.—and had brought credit to the Association by these activities. He referred to the *Supplement* in the DENTAL PRACTITIONER, paying tribute to the dental surgeon editors for their recognition of the desirability and necessity for a closer understanding and value of the need for both spheres of the dental field to appreciate each other's particular and somewhat peculiar difficulties and requirements. He said that although the dental profession was passing through difficult times, this organization re-asserted its intention of continuing to play what must be an important part in the development of a complete and efficient service to the public. Concluding, our President paid particular tribute to our Vice-Chairman, Alex J. Grant, Mr. Guy Drew, Chairman of S.I.M.A., Mr. Maurice Down, Chairman of the Education Committee, Mr. Sidney Davis, Miss D. Sawers, the Committee, and many others, ending by

thanking his wife, without whose co-operation, encouragement, and forbearance his many activities in connexion with the D.L.S. of S.I.M.A. would not have been possible.

During intervals we were entertained by the delightful singing of Miss Lucy Moore (soprano), and Messrs. Bennett and Williams, the well-known B.B.C. comedians.

On returning to the ballroom, some commenced dancing, others contacted their friends from distances, made personal acquaintance with those who till then had been only names, or listened to the comrades of the war-service days retelling their yarns.

The singing of "Auld Lang Syne" at 11.30 p.m. brought to an end a most successful and pleasant function, which had been organized and carried through once again by our able master of ceremonies, Mr. C. M. Booth.

ANNUAL GENERAL MEETING

ABRIDGED REPORT

THE Annual General Meeting was held at the Holborn Restaurant, London, W.C.1., on Saturday, Feb. 9, 1952, at 10.45 a.m., under the chairmanship of Mr. E. G. Emmett. The Chairman presented the following report:—

Liaison with other Organizations.—We have endeavoured to foster closer relations with the British Dental Association, with whom we are associated on the employers' side of the N.J.C., and a memorandum dealing with various matters on which their co-operation was invited was submitted to that organization. The items included the avoidance of cut prices, the establishment of a Fair List of Prices, and the desirability of a prior exchange of views on all matters coming before the N.J.C. Conversations followed with B.D.A. representatives, but although the B.D.A. expressed willingness to discuss with S.I.M.A. at any time any matter of mutual interest, their attitude on the question of prices was nebulous and disappointing.

The committee felt, however, that we should continue our endeavours to obtain the co-operation of the B.D.A. and that a further approach should be made to them

when there was a suitable subject for discussion. The wages dispute and the Dentists' Bill have provided such opportunities, and we have had discussions with them on these matters.

Wherever possible we have sought the collaboration of the trade unions, and conversations have taken place with them on the ratio of apprentices and the Dentists' Bill.

We were approached by the I.D.T.A. with an invitation to enter into joint negotiations with them in connexion with the Dentists' Bill, but the committee took the view that it was inadvisable to collaborate with this body.

Representation on National Joint Council.—A request was made to the National Joint Council for additional representation for S.I.M.A. and this has been accepted in principle. After ratification at the next meeting of the N.J.C., S.I.M.A. will, therefore, have two representatives on the employers' side of the Council.

Increase in Wages.—Members will be aware of the increase in the wages of technicians and apprentices awarded by the Industrial Disputes Tribunal which was made retrospective to the first pay period following Nov. 16, 1951. This followed protracted negotiations on the N.J.C., in the course of which an offer was made by the B.D.A. but rejected by the unions, who then referred the matter to the Industrial Disputes Tribunal. S.I.M.A. dissociated itself from the B.D.A. offer, as we felt that the present economic position did not warrant any improvements in wages. Having adopted this view we were unable to support the case put forward on behalf of the employers' side by the B.D.A., and as they were not prepared to accept any substantial amendments, a supplementary memorandum was submitted to the Tribunal by S.I.M.A.

Wages during Sickness.—The Association has supported a proposal submitted to the N.J.C. by the B.D.A. to the effect that the sick-pay clause in the regulations should be amended to provide for a reduction of payment during sickness by the amount of any sickness benefit obtained by the employee under the National Health Insurance Scheme.

Abolition of Grade III.—The trade unions have pressed for the abolition of Grade III and the B.D.A. has agreed to the closure of entry into this grade as from July 1, 1952. We felt that there was a case for the retention of Grade III, but were unfortunately in a minority on the N.J.C. The trade unions, however, agreed that there would have to be people to do the work in the laboratory which did not come within Grades I and II, although they stressed the fact that there must be no infringement by these people on the work of Grades I and II.

Grading.—Some of our members feel that the present grading as defined by the National Joint Council is unsatisfactory and that in view of the elimination of Grade III the time is opportune for a revision. The branches have therefore been asked to ascertain the views of their members, and their observations will be considered by the Main Committee.

Dental Technicians' Bill.—Following much discussion the terms of this Bill were agreed by the N.J.C. after a number of amendments had been incorporated at the request of S.I.M.A. The Bill was to have been presented to the Minister of Health with a view to getting him to sponsor it in Parliament, but in view of other dental legislation the matter has not been proceeded with. We understand that the trade unions are endeavouring to get the provisions of the Dental Technicians' Bill incorporated in the Dentists' Bill.

Local Joint Training Committee.—We have repeatedly pressed the N.J.C. to proceed with the formation of these Committees throughout the country, and a model constitution has now been framed which provides specifically for the representation of S.I.M.A. as well as the B.D.A. and the trade unions on local Joint Training Committees.

Education.—I am pleased to report on a matter which can be devoid of political implications. It is gratifying to report the activities of members in educational matters; many members have lectured in various places, imparted their specialized knowledge as lecturers at the many colleges, served on Educational Advisory Committees, including the City and Guilds, and provided examiners.

Education Advisory Committee.—There has been a reconstitution of the N.J.C. Education

Advisory Committee which it is felt will enable it to function more effectively and to establish a closer liaison with the City and Guilds. Alterations and adjustments to the syllabus are now under consideration and it is contemplated that these will be put into operation during this year.

The Dentists' Bill.—The Main Committee considered the draft Bill immediately it became available and, after the views of the branches had been invited, a special meeting was held to formulate the Association's policy in regard to the clauses dealing with ancillary workers. After consultation with Mr. Davis and careful consideration of the implications of the Bill, it was decided to explore the position with the B.D.A. and the trade unions on the basis of either the deletion of the ancillary classes from the Bill or an amendment which would give the dental technician priority over the ancillary worker. With the assistance of the National Union of Manufacturers, an interview was arranged with Lord Rochdale at which Mr. Davis and I discussed with him the possibility of getting an amendment to the Bill. He finally undertook to raise the matter on the second reading of the Bill in the House of Lords on the lines that the D.L.S. of S.I.M.A. were gravely concerned lest the establishment of these classes of ancillary workers should encroach on the preserves of the highly trained dental technicians, more especially as dental technicians had to serve an apprenticeship period of five years before they could work as such. Three alternatives were suggested, viz.:—

1. The deletion of clauses 18–20.

2. The introduction of a sub-section so that no ancillary worker was permitted to undertake the work of a dental technician.

3. An assurance that in the regulations there would be a class of ancillary workers reserved entirely for those with the full qualifications of dental technicians.

Although future action depended upon what happened in the House of Lords he hoped that it would be possible to arrange a discussion between the organizations concerned, including S.I.M.A. and the Ministry of Health, with a view to getting an amendment at the Committee stage or in the House of Commons.

Standardization of Dental Materials.—After conversations with Dr. Senior regarding the standard of materials, on his suggestion we approached the British Standards Institution, who had some time previously been requested to set up machinery to secure the creation of a set of standards for dental materials. The matter had been left in abeyance but following our own pressure and that from other sources, a conference was held in July at which various organizations were represented. Mr. Booth and I attended on behalf of S.I.M.A. and all those present appeared to be in favour of the establishment of standards for dental materials. Prior to the Conference S.I.M.A. had made a request for representation on any Committee which might be formed and we have since been informed that this will be taken into consideration when the various sub-committees dealing with specific items are appointed.

Dental Practitioner Supplement.—S.I.M.A.'s first *Supplement* appeared in the DENTAL PRACTITIONER last April and has continued regularly each month. We are much indebted to Mr. Booth and Mr. Potter for the arduous work they have carried out as members of the Editorial Board. The lack of suitable technical material furnished by members has placed an additional burden on the shoulders of these members and Mr. Booth has, I regret to say, intimated that he can no longer continue to give the time which the editorial work entails. The whole question of publication is therefore being reviewed and a recommendation will be made when the matter has been fully explored.

Summer Conference.—A One-day Conference was very ably organized by Mr. Booth under the auspices of the London Regional Branch and was held at the Holborn Restaurant on July 7. Addresses were given by Mr. Mather on "Laboratory Costing" and Mr. C. M. Booth on "Laboratory Organization". The proceedings concluded in the evening with an informal dinner for members and friends. Those responsible for the organization were somewhat disappointed at the number of members who attended these meetings, but those who were present felt the effort was well worth while.

Week-end Conference.—Mr. Booth again undertook the organization of the Week-end

Conference, for which the London Regional Branch accepted responsibility. As this is now proceeding members will be well aware of the arrangements and we hope that they will enjoy and benefit from the social and business contacts available to them through these meetings. Mr. Booth has been unsparing in his efforts to make the week-end a success and we are very deeply indebted to him for the hard work he has put into it.

Branches.—There are now 9 branches of S.I.M.A., and during the year I have attended meetings at Newton Abbot and Leicester, where endeavours have been made to institute further branches. Local members are continuing their efforts and it is hoped that branches will be established in these areas during the coming year.

Resignations from the Main Committee.—It was regretted that Mr. C. M. Booth and Mr. R. Foale did not seek re-nomination and in expressing an appreciation of the great work these two members had contributed on behalf of fellow members, the hope was expressed that both of them would consider re-associating themselves another year.

Election of Committee.—The following members were elected to serve on the Main Committee for the ensuing year:—Messrs. G. E. Cross, E. G. Emmett, A. J. Grant, J. L. Jacobs, F. E. Martin, H. J. Potter.

EXHIBITION OF LABORATORY EQUIPMENT AND TECHNIQUES

Held on Saturday, Feb. 9, at 2.30 p.m.

It is hoped to publish, in the May issue, photographs of the ten table displays of the members of the Association of Dental Manufacturers and Traders who participated in this exhibition. Each house will be invited to supply an account of all they had to show and explain.

NEWS FROM HEAD OFFICE

The Dentists' Bill.—In the House of Lords on Feb. 5, Lord Rochdale voiced the concern of the Dental Laboratories Section of S.I.M.A. as to the possibility that the establishment of the proposed group of ancillary workers might lead to an encroachment upon the position of dental technicians. He suggested the following alternative amendments:—

1. The insertion of a sub-paragraph in the Bill to the effect that no ancillary dental worker shall be permitted to undertake the work of dental technicians unless he also possesses the full qualifications required by dental technicians to-day.

2. An assurance that a special class of ancillary dental workers might be established exclusively for dental technicians, calling for the same level of qualifications as apply to-day.

Conversations are proceeding with the B.D.A. and the trade unions with a view to finding a basis for joint action in connexion with the Bill on behalf of all the constituent bodies of the National Joint Council.

New Members.—The following candidates have been recommended for election as members of the Dental Laboratories Section:—

Full Members

A. S. Latchford, 66, New Cavendish Street, London, W.1.

J. Haydon, 197, Edgware Road, London, W.2.

Affiliated Member transferred to Full Membership

Ferris & Davies, 15, Allesley Old Road, Coventry.

Affiliated Member

T. F. Maull, 37, The Mount, Guildford, Surrey.

Change of Address.—Mr. W. H. Gates has removed to the following address: 20, Pirton Road, Hitchin, Herts.

Industrial Disputes Tribunal Award.—A number of inquiries have been dealt with in connexion with the above Award and members who may be in any doubt as to its application to their employees are advised to consult Head Office.

Increase in Rates of Pay for Grade III Technicians.—The N.J.C. has decided that the minimum wage for Grade III should be £6 per week ante-dated to Jan. 1, 1952.

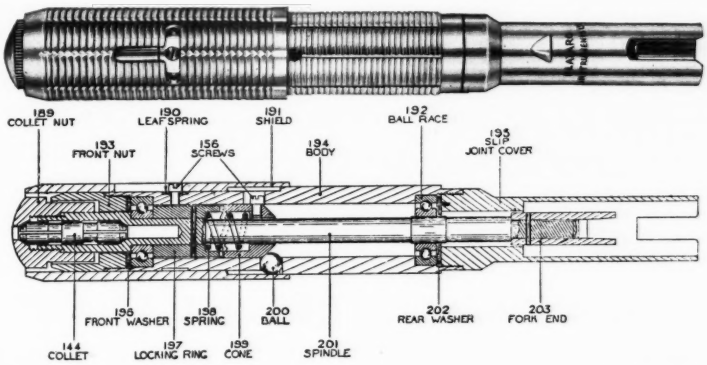
Grading of Dental Technicians.—As a result of the increased salaries now applicable to Grades I and II, and the abolition of Grade III next July, it is felt that the time is opportune for a revision of the grading as laid down by the National Joint Council. The matter has been discussed by the Main Committee of S.I.M.A. and it is considered that the grading should be governed by the work actually performed by the technician.

IS THIS WHAT YOU ARE LOOKING FOR?

For too long has the Dental Laboratory Technician been forced, through lack of any alternative, to use handpieces which were designed solely for use in the surgery and which do not stand up to the more robust needs of the laboratory.

The Laboratory Handpiece, Type 30, has been specially designed to give the technician a handpiece suitable for his own requirements.

The main features of this handpiece are its simple bur-loading mechanism, which allows for either straight or R.A. burs to be used. It is practically dustproof and requires only a minimum of cleaning. The shaft runs on ball-bearings, giving a smooth and trouble-free operation, while heating is reduced to an absolute minimum.



A special feature of the handpiece is that the technician is not restricted to the use of dental burs mounted on a $\frac{3}{32}$ in. mandrel. Additional collets can be obtained which will enable burs mounted on $\frac{1}{16}$ in. or $\frac{1}{8}$ in. mandrels to be used. This allows for the use of a wider selection of industrial burs, the method of changing to a different sized collet being so simple that the operation can be performed in a matter of seconds.

BOOKS FOR THE TECHNICIAN

It has been requested that a list of text-books especially useful to the technician should be published. In this connexion, we are happy to state, the assistance of the Institute of British Surgical Technicians was sought and readily given. Readers are advised that these books are all available to members of the Dental Section of the I.B.S.T. through its excellent library.

Practical Orthodontics (*Dewey*). By G. M. Anderson. 7th ed. (1948.) (*Kimpton.*) 70s.

Prosthetic Dentistry. By L. P. Anthony. 7th ed. (1942.) (*Kimpton.*) 75s.

Surgical and Maxillo-Facial Prosthesis. By O. E. Beder. (1949.) (*Oxford*) (only to order from U.S.A.). 20s.

Dental Prosthetic Laboratory Manual (paper—loose leaf). By C. O. Boucher. (1948.) (*Kimpton.*) 31s. 6d.

Facial Prosthesis. By A. H. Bulbulian. (1945.) (*Saunders.*) Out of print.

Prosthetic Dentistry. By F. W. Craddock. (1951.) (*Kimpton.*) 28s.

Three-Quarter Crowns. By F. Engel. (1946.) (*Kimpton.*) 31s. 6d.
Principles of Full Denture Prosthesis. By E. W. Fish. 4th ed. (1948.) (*Staples.*) 15s.
Maxillo-Facial Injuries (Vol. 1). By Fry, Shepherd, McLeod, and Parfitt. (1942.) (*Blackwell.*) 16s.
Supplement. By McIndoe. (1944.) (*Blackwell.*) 21s.
Review of Dentistry. By J. T. Ginn. (1949.) (*Kimpton.*) 40s.
Partial Denture Construction. By E. Kennedy. 2nd ed. (1942.) (*Kimpton.*) 70s.
Practical Full Denture Prosthesis. By J. S. Landa. (1947.) (*Kimpton.*) 56s.
Applied Orthodontics. By J. D. McCoy. 6th ed. (1946.) (*Kimpton.*) 31s. 6d.
Dental Mechanics for Students. By J. Osborne. 3rd ed. (1950.) (*Staples.*) 30s.
Acrylic Resins in Dentistry. By J. Osborne. 3rd ed. (1948.) (*Blackwell.*) 15s.
Principles of Orthodontics. By J. A. Salzmann. (1950.) (*Lippincott.*) £6.
Mechanical Dentistry. By E. Samson. (1945.) (*Technical Press.*) 15s.
Complete Denture Prosthesis. By R. O. Schlosser. (1946.) (*Saunders.*) 35s.
Modern Methods of Tooth Replacement. By J. R. Schwartz. (1942.) (*Kimpton.*) 84s.
Acrylic Plastics in Dentistry. By J. R. Schwartz. (*Kimpton.*) 84s.
Restorative Dentistry. By J. M. Schweitzer. (1947.) (*Kimpton.*) 105s.
Principles and Technics for Complete Denture Construction. By W. H. Sears. (1949.) (*Kimpton.*) 36s.
Stainless Steel Work in Mechanical Dentistry. By S. H. Siddle. (1945.) (*Kimpton.*) 5s.
Science of Dental Materials. By E. W. Skinner. 3rd ed. (1946.) (*Saunders.*) 30s.
Manual on Dental Metallurgy and Non-Metallic Materials. By E. A. Smith. 6th ed. (1947.) (*Churchill.*) 16s.
Chemistry and Metallurgy of Dental Materials. By J. C. Smith. (1949.) (*Blackwell.*) 21s.
Complete Dentures. By M. G. Swenson. 2nd ed. (1948.) (*Kimpton.*) 88s.
A Comprehensive Review of Dentistry. By V. R. Trapozzano. (1949.) (*Saunders.*) 32s. 6d.
Theory and Practice of Crown and Bridge Prosthesis. By S. D. Tylman. 2nd ed. (1947.) (*Kimpton.*) 88s.
Acrylics. By S. D. Tylman and Peyton. (1946.) (*Lippincott.*) 80s.
History of Dentistry (2 vols.). By B. W. Weinberger. (1948.) (*Kimpton.*) 140s.
Dental Anatomy and Physiology. By R. C. Wheeler. 2nd ed. (1950.) (*Saunders.*) 34s.
Year Book of Dentistry. (*Lewis.*) 37s. 6d., plus postage 2s. (only to order from U.S.A.).
Dental Anatomy. By R. C. Zeis and J. Nuckolls. (1949.) (*Kimpton.*) £5.
Practical Dental Anatomy and Tooth Carving. By J. R. Schwartz. (1935.) (*Kimpton.*) 35s.
Full Denture Technique. By W. J. Tuckfield. 3rd ed. (1948.) (*Ramsey Ware Pub. Co., Melbourne.*)

We are indebted to Messrs. H. K. Lewis & Co. Ltd., of 136, Gower Street, W.C.1, for their assistance in verifying this list.

NEWS FROM THE BRANCHES

Croydon Branch Report.—At the resumed Annual General Meeting, which was adjourned from Jan. 20 to Feb. 22, Mr. D. M. Beauchamp was elected to the Chair in place of Mr. Chambers, who resigned after five years' service. Mr. Cole was re-elected Treasurer, and Mr. Nowers as Secretary and Branch Representative to the Main Committee.

In view of the decision that S.I.M.A. was responsible for all Branch expenses, it was decided to reduce the Annual Branch Subscription from £1 1s. 0d. to 10s. 6d.

London Regional Branch.—The Committee of the Branch met at 6, Holborn Viaduct, E.C.1, on Thursday, Jan. 31, for the purpose of the election of officers for the ensuing year, and discussing certain other matters which included interviewing applicants for membership to the Dental Laboratories Section, S.I.M.A., and the arrangements for the Week-end Conference due to take place on Feb. 8–9, for the organization of which the London Regional Branch had accepted responsibility. The event is reported elsewhere in this *Supplement.*

S.I.M.A. (DENTAL LABORATORIES SECTION) DIARY

North-Eastern (*Secretary*: Mr. B. Shaw, 110, Morley Street, Bradford, Yorks).—Meeting, Saturday, April 5, at the White Swan Hotel, York.

Croydon (*Secretary*: Mr. H. J. Nowers, F.I.B.S.T., 86, Croydon Road, Croydon).—Screen illustrated lecture, "Partial Dentures", Col. Arthur H. Schmidt, U.S.A.F., Norbury Library, April 25, at 7.30 p.m. sharp. Business Meeting, May 16, 1952, at the Six Bells, Croydon.

South Wales and Monmouthshire (*Secretary*: Mr. R. Mather, F.I.B.S.T., 16, Clodien Avenue, Gabalfa, Cardiff).—Meetings, Thursday, April 3 and May 1, 1952, at Royal Hotel, Cardiff.